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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/073,854  | 02/14/2002  | Keitaro Aoshima      | 003510-119          | 6325             |
| 7590  | 02/02/2004  |                      | EXAMINER            |                  |
| Platon N. Mandros<br>BURNS, DOANE, SWECKER & MATHIS, L.L.P.<br>P.O. Box 1404<br>Alexandria, VA 22313-1404 |             |                      | HAMILTON, CYNTHIA   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1752                |                  |

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                             |                              |                                |
|-----------------------------|------------------------------|--------------------------------|
| <b>Offic Action Summary</b> | Application N<br>10/073,854  | Applicant(s)<br>AOSHIMA ET AL. |
|                             | Examiner<br>Cynthia Hamilton | Art Unit<br>1752               |

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 12-12-03, 9-22-03, 9-25-03.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-2, 4-5, 7, 9-17 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,2,4 and 9-17 is/are rejected.

7) Claim(s) 5 and 7 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 3, 6, 8, and 18-19 have been cancelled. Claims 1-2, 4-5, 7, 9-17 remain for examination purposes. Applicants have amended claim 1 to include the limitations of claims 3 and 18 now cancelled. The examiner notes this combination of limits in claims under examination is newly presented. Before applicant's amendment of September 22, 2003, the composition now claimed was not part of the claims examined. Applicants newly present the combination of instant (A) limited to having at least one amide bond and the requirement that (D), i.e. a compound capable of generating heat by infrared exposure, be present with said amide bond containing (A). All claims 1-2, 4-5, 7, 9-17 are so limited.
2. The information disclosure statement filed December 12, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The reference, EP 1 072 955 had only the front page present and there was no copy of JP 8-06283. These references were crossed out. The Examiner added the citation of the English Abstract page submitted for JP 8-06283. With the crossed out references, they have not been considered.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4, 9-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimaki et al (2003/0008239 A1). Examples 46, 47 and 51 of Fujimaki et al anticipate the instant compositions of claims 1-2, 4, 9-17 wherein the U compounds are inherently solid at 25 degrees C.

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6. Claims 1-2, 4, 9-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Aoshima (EP 1 096 315 A1). Examples 7-8 of Aoshima anticipate the instant compositions of claims 1-2, 4, 9-17 wherein the monomer at [0164] is inherently solid at 25 degrees C.

7. Claims 1-2, 4, 9-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Aoshima (6,566,035 B1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

8. Claims 1-2, 4, 9-10, 13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Grunewald et al (5,641,608) as evidenced by SR-368 product bulletin and Product Data Scriptset 550 and Luders et al (3,725,356). Example 9 of Grunewald et al anticipates the instant compositions of claims 1-4, 13 and 17-19 wherein SR368 is the instant (A) solid with a melt point of 52-54 degrees C, Scriptset 550 is the binder with a weight average molecular weight of 105,000 as evidenced by Product Data and lauroyl peroxide is the radical polymerization initiator as evidenced by Luders et al in col. 3, lines 44-55 with I.R. absorbing dye project 860 NP is the heat generating compound. The examiner notes that SR-368 product bulletin identifies SR-368 as tris (2-hydroxy ethyl) isocyanurate triacrylate. The structure given does not show the presence of an hydroxy group, so it is assumed the “hydroxy” in the name references the use of an hydroxy ethyl group to form the final compound. Another name for this structure is tris

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(acryloxyethyl) isocyanurate which is the name used by applicants in the paragraph bridging pages 7-8. At the bottom of page 7, applicants in their specification clearly disclose this tris (acryloxyethyl) isocyanurate as a compound having amide bonds. The only amide bonds possibly referenced are those in the isocyanurate ring which is the same ring found in SR-368. Thus, Example 9 of Grunwald et al anticipates the instant composition of claims 1-2, 4, 13 and 17 still even after amendment. With respect to instant claims 9-10, the process of Example 9 in Grunwald et al makes use of an Infrared diode laser imaging at 870 nm. Thus, the composition of Example 9 is also capable of being exposed with infrared light having a wavelength of no less than 750 nm. Thus, the compositions of instant claims 9-10 are anticipated by Example 9 of Grunwald et al as well.

9. Applicant's arguments filed September 22, 2003 have been fully considered but they are not persuasive. Applicants argue that Grunwald et al. and in particular Example 9 does not disclose a material with instant component (A) present. (A) defines a polymerizable compound that is solid at 25° C and has at least one radical-polymerizable ethylenically unsaturated double bond and at least one amide bond in a molecule. The examiner holds applicant's allegations to be wrong in view of their own inferred definition as to what an amide bond is in their specification. The examiner notes that SR-368 product bulletin identifies SR-368 as tris (2-hydroxy ethyl) isocyanurate triacrylate. The structure given does not show the presence of an hydroxy group, so it is assumed the "hydroxy" in the name references the use of an hydroxy ethyl group to form the final compound. Another name for this structure is tris (acryloxyethyl) isocyanurate which is the name used by applicants in the paragraph bridging pages 7-8. At the bottom of page 7, applicants in their specification clearly disclose this tris (acryloxyethyl)

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isocyanurate as a compound having amide bonds. The only amide bonds possibly referenced are those in the isocyanurate ring which is the same ring found in SR-368. The acryl groups are the instant radical-polymerizable ethylenically unsaturated double bonds and the amide bond, i.e.  $-\text{C}(=\text{O})\text{N}-$ , is in the isocyanurate ring of SR-368. SR-368 has a melting point of 52-54° that is well above the required 25° C thus showing that SR-368 is solid at 25° C as also required. The examiner also believes that tris (acryloxyethyl) isocyanurate cited by applicants as an example of the instant (A) is essentially the same compound as SR-368. Thus, the composition of Example 9 of Grunwald et al does anticipate the instant composition with respect to this one ultimate species. The rejection stands.

10. Claims 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

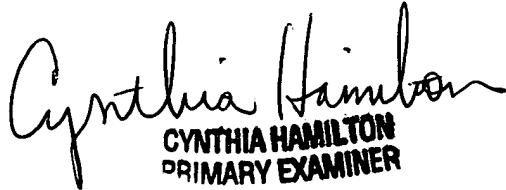
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cynthia Hamilton whose telephone number is (703) 308-3626. As of December 12, 2003, this telephone number will be 571-272-1331. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff can be reached on 703-308-2464. As of December 12, 2003 this phone number will be 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.*



Cynthia Hamilton  
CYNTHIA HAMILTON  
PRIMARY EXAMINER

Primary Examiner Cynthia Hamilton

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January 23, 2004